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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,026	06/15/2001	Bernard Fay	PAO233	7838

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EXAMINER

YOUNG, CHRISTOPHER G

ART UNIT PAPER NUMBER

1756

DATE MAILED: 02/11/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,026

Applicant(s)

Fay et al.

Examiner

Young

Group Art Unit

1756

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE -3- MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 12/26/02
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-12 is/are pending in the application.
- Of the above claim(s) 11 + 12 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-10 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☒ Claim(s) 1-12 are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit 1756

1. This Office action is responsive to the amendment (Paper No. 7) filed December 26, 2002 wherein claim 12 was amended. Additionally, the claims of Group I, 1-10, were elected for prosecution in the instant application with traverse. Claims 11 and 12 stand withdrawn by the Examiner as being part of the non-elected invention.

2. The traverse of the restriction requirement in the remarks of the amendment has been carefully considered but is not deemed to be persuasive for the reasons of record as set forth in the restriction requirement of the last Office action, Paper No. 6 in combination with the following remarks.

The inventions as claimed are clearly distinct and capable of supporting separate patents within the meaning of 35 U.S.C. § 121. Clearly to examine both process, apparatus, and product claims would require a divergent field of search and consideration of a multitude of embodiments for the various inventions that requires undue burdensome search and examination. It is clear from looking at the restriction requirement that the three groups of claims are classified in three separate classes. That alone renders the joinder of these claims, and the subsequent examination, burdensome. The restriction requirement is repeated and made FINAL.

Art Unit 1756

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Kawakubo et al.

See specifically column 20, line 57 - column 21, line 7 wherein a method for measuring overlay alignment utilizing an interference pattern is disclosed.

5. Claims 1-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakubo et al. in combination with one of ordinary skill in the requisite art's ability.

The essential requirements of the instant invention as claimed are drawn to a method of measuring overlay alignment in sequential lithographic exposures wherein first separated features are formed on a surface, second separated features are formed on a surface being interleaved between the first separated features and illuminating the first and second separated features to detect an interference pattern. Kawakubo et al. at column 20, line 57 - column 21, line 7 describe, teach and suggest the essential requirements of the instant invention as claimed wherein an exposure method for overlying one mask pattern on another is taught. Claim 1 is anticipated by Kawakubo et al. as set forth in the rejection of paragraph No. 4 above. However, Kawakubo et al. does not specifically state or particularly point out the different types of scatterometers utilized in the instant application and set forth in the dependent claims, nor are the specific measurements to determine ratios and response patterns particularly pointed out or distinctly claimed. However, one of ordinary skill in the requisite art in possession of the Kawakubo et al. teachings would have found use of all well known interference pattern generating alignment devices and their associated property characteristics in the method of Kawakubo et al. absent objective evidence of high probative value to the contrary. This is true because Kawakubo et al. states that numerous different image processing type position detecting

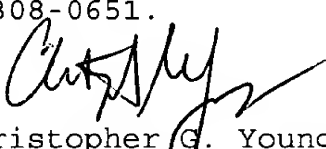
Art Unit 1756

methods can be utilized to include the two beam interference type detection method and alludes to the fact that any well known type apparatus could be utilized in this manner.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Young, whose telephone number is (703) 308-2984. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff, can be reached on (703) 308-2464. A Fax communication that is for a non-final fax should be sent to (703) 872-9310. An after final fax should be sent to (703) 872-9311.

Any inquiry of general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.



Christopher G. Young
Primary Examiner
Art Unit 1756

C. Young:cdc
January 9, 2003